

Amendments to the Specification:

Please amend the specification as follows:

Please replace the paragraph beginning at page 1, line 16 with the following rewritten paragraph:

Related apparatuses and techniques are described in publications such as US 2003/006148, GB 2 064 124, EP 0 882 975, EP 0 560 443 and EP 1 152 235. Reference is made to all of the above mentioned patent publications and all ~~[[is]]~~ are hereby incorporated in the present specification by reference.

Please replace the paragraph beginning at page 7, line 14 with the following rewritten paragraph:

It is suggested that currents measured between the pipe and the hereto connected probe during a 24 ~~[[hours]]~~ hour period should be compared with current flowing in a well protected system without stray current. Accept criteria are based on time at bad condition and the degree of the bad condition. No direct corrosion rate is measured; however weight loss coupons can be used to further verify the well-functioning of the CP system or the degree to which corrosion occurs due to DC stray current interference. Weight loss coupons are coupons that are electrically coupled to the pipe and exposed in the adjacent soil. ~~The coupon is~~ coupons are weighed before such exposure. After an adequate period of time (typically one year or more) the coupons ~~[[is]]~~ are excavated and brought to the laboratory for cleaning and weighing once again. The weight loss can be used to describe the corrosion. The procedure is rather time consuming and the corrosion condition cannot be detected during the period of exposure, i.e. one has to excavate, bring coupons to the lab and ~~analyse~~ analyze them before the result is evident.

Please replace the paragraph beginning at page 18, line 17 with the following rewritten paragraph:

Fig. 2a is a schematic representation of the measurement system 10. In the presently preferred embodiment of the present invention, the measurement system 10 is electrically connected to

three separate probes 20, 22 and 24, each connected to a processing unit ~~[[26]]~~ 56. In the presently preferred embodiment of the present invention, each of the sensors 20, 22, 24 is not directly coupled to the processing unit ~~[[26]]~~ 56. Each of the sensors 20, 22, 24 is connected to a corresponding two wire balanced wire 28, 30, 32, which ensures that external electrical noise only has a minimal influence on the electrical signal travelling through each of the wires 28, 30, 32.

Please replace the paragraph beginning at page 18, line 31 with the following rewritten paragraph:

Each of the probes 20, 22, 24 is supplied with 5 ~~[[volt]]~~ volts through a 20 ohm reference resistor 40, 42, 44. The common mode current of the probe will be approximately 2.5 ~~[[volt]]~~ volts, which is within the AD converter's common mode region. The probes 20, 22, 24 are connected to the pipeline by a cable 33. The probes 20, 22, 24 are, in turn, electrically connected to the cable 33 through switching devices 35, 37, 39, respectively. The switching devices 35, 37, 39 are operable for the selective electrical connection and disconnection of the respective probes and the pipeline 14 via the cable 33.

Please replace the paragraph beginning at page 19, line 1 with the following rewritten paragraph:

The wires 28, 30, 32 may be constituted by wires having a ~~diameter~~ cross-sectional area of 0.14 mm<sup>2</sup>, alternatively a ~~diameter~~ cross-sectional area of 0.25 mm<sup>2</sup>. In the presently ~~perferred~~ preferred embodiment of the present invention, the cables are made from a material having a specific ~~resistance~~ resistivity of 0.01725 ohm x mm<sup>2</sup>/m. Having a wire of the length of 30 m results in a total resistance of 7.4 ohm using a cable with a ~~diameter~~ cross-sectional area of 0.14 mm<sup>2</sup> and 4.74 ohm using a wire having a ~~diameter~~ cross-sectional area of 0.25 mm<sup>2</sup>.

Please replace the paragraph beginning at page 19, line 18 with the following rewritten paragraph:

In Fig. 2b, an electronic circuitry schematic is shown, illustrating in greater details the circuitry of the current excitation circuit ~~block 46 of Fig. 2a~~, and includes identification of the various components in terms of type and value. No detailed description of the circuitry is given, as the circuitry is believed to be entirely self-explanatory.